6 - WORKING OPERATIONS

GENERAL INFORMATION

Variable engine power management

Power management

Power Management (PM) is an electronically controlled engine power boost function which increases power levels where high loads may compromise tractor performance.

When the criteria for PM activation are met, the PM light **(1)** in the instrument cluster will illuminate. As the power requirement reduces and PM is deactivated, the light will extinguish.

PM boost levels are variable depending on engine load, drive line torque and tractor speed. Dependent on tractor model, the available power increase is between **1 kW** (**1.4 Hp**) and **24 kW** (**32.6 Hp**) and will vary as the load on the engine changes.

PM is a totally automated function requiring no input from the operator. PM can be activated during PTO operations, road transport applications and when operating with powered hydraulic equipment.

PM can be activated for both, forward and reverse drive direction.

NOTE: *PM will be disabled if the engine coolant temperature exceeds **105 °C** (**221 °F**). In this situation either increase the engine speed or reduce the load on the engine until the coolant temperature is reduced.*

PTO operations

Power Management will only function when the following criteria are met:

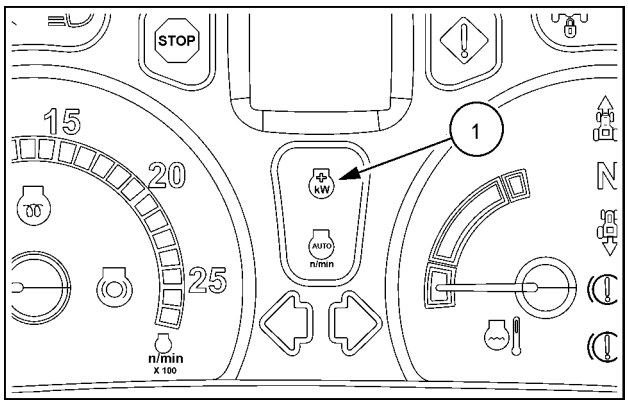
PTO fully engaged.
Tractor forward speed above **0.5 km/h** (**0.3 mph**).
PTO drive line output torque is above **112 Nm** at the engine shaft.
Engine coolant temperature below **105 °C** (**221 °F**)

NOTE: *Power Management will operate at all PTO speeds.*

Engaging the rear PTO while the tractor is moving will put PM into standby.

As the torque and load on the PTO reaches or exceeds the above levels, the indicator light **(1)** will illuminate and Power Management will be activated.

As the load on the engine is reduced, boost levels will gradually decrease until engine power levels are within normal limits.



SVIL17TR00618AA 1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

MAINTENANCE CHART

Maintenance chart

Maintenance action	Replace	Drain fluid	Check	Cleaning	Grease	Charging	Bleed	Change fluid	Adjust	Page no.
WHEN THE WARNING LAMP LIGHTS										
Change the engine air cleaner outer element	x									7-14
Drain the fuel system water separator		x								7-15
Check the brake fluid level			x							7-16
EVERY 10 HOURS OR EACH DAY										
Check the engine coolant level			x							7-17
Check the engine oil level			x							7-18
Check the remote control valve drain bottles			x							7-18
Check windscreen washer reservoir			x							7-19
Drain air reservoir on air operated trailer brake		x								7-19
FIRST 50 HOURS										
Service operations			x							7-20
EVERY 50 HOURS										
Clean the cab air filter				x						7-21
Clean the SCR cover air ducts				x						7-23
Clean the cooler section				x						7-24
Grease all fittings					x					7-25
Check the front and the rear wheel nuts			x							7-32
Check the tire pressures and the tire condition			x							7-32
EVERY 150 HOURS										
Inspect the compressor drive belt			x							7-33
EVERY 375 HOURS										
Check the battery fluid level			x							7-34
Inspect the poly V-belt			x							7-36
Check the transmission oil level, the rear axle oil level and the hydraulic oil level			x							7-37
Adjust the hand brake								x		7-38
Check the front PTO gearbox oil level			x							7-38
EVERY 750 HOURS										
Change engine oil and filter	x									7-39
Change the first stage fuel filter and the fuel filter element	x									7-41
Change the hydraulic charge pump oil filter and the transmission oil filter	x									7-43
Check the air intake system			x							7-44
Check the transmission oil cooler pipe couplings			x							7-45
EVERY 750 HOURS OR EVERY YEAR										
Change the engine air cleaner outer element	x									7-46
EVERY 750 HOURS OR EVERY 2 YEARS										
Change the 4WD planetary hub oil							x			7-46
EVERY YEAR										
Check the accumulators (where fitted)			x							7-47
EVERY 1500 HOURS										
Change the front PTO gearbox oil							x			7-48
EVERY 1500 HOURS OR ANNUALLY										
Change the cab air filters	x									7-48
EVERY 1500 HOURS OR EVERY 2 YEARS										

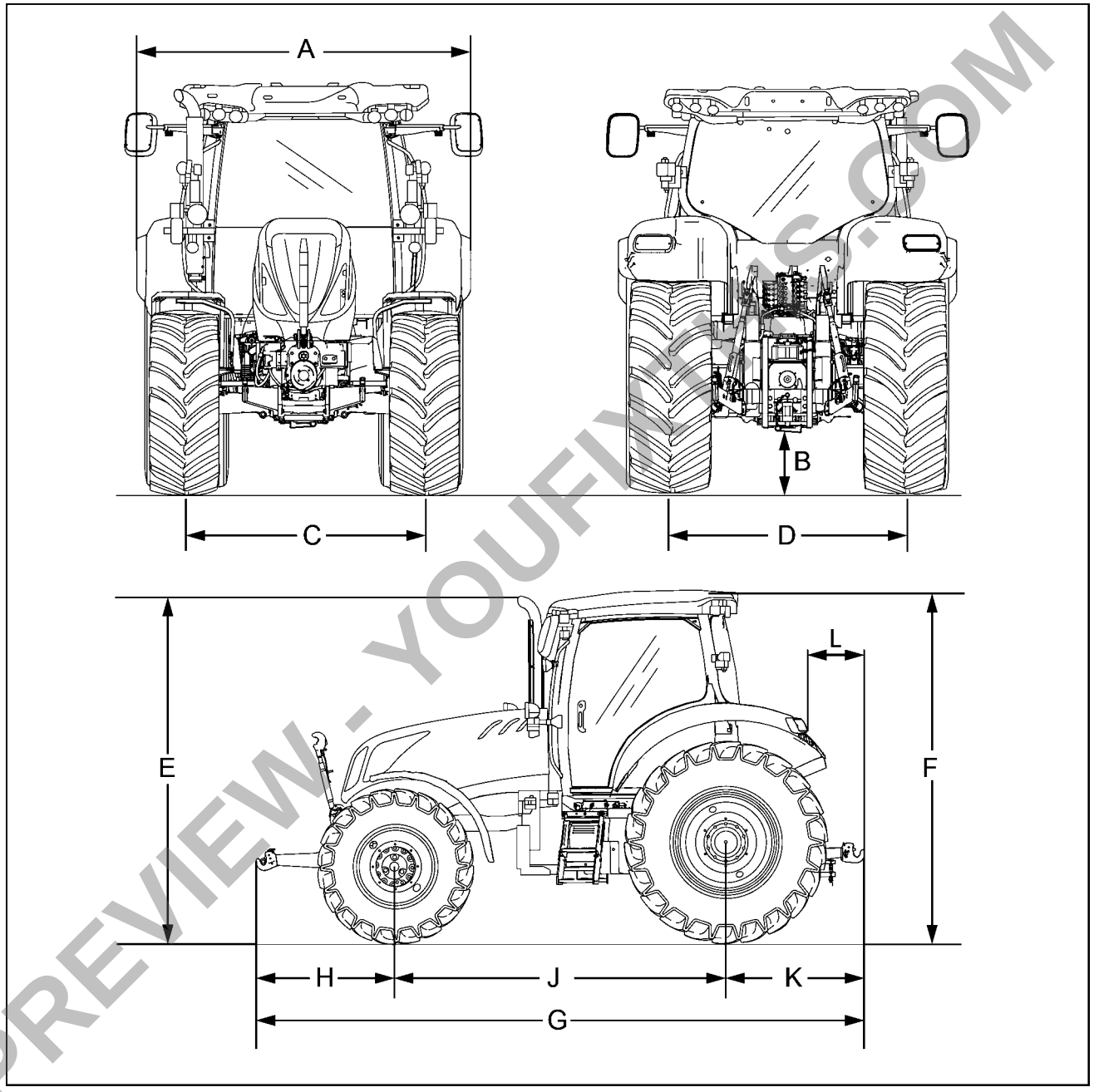
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

9 - SPECIFICATIONS

General dimensions

General dimensions



SVIL17TR01239GA 1

PREVIEW - YOUFIXTHIS.COM

NOTE: *The following dimensions are based on standard tractors fitted with tyre size as shown. If your tractor has tyres of a different size then the dimensions will vary due to the difference in the rolling radius and section width of the tyres fitted.*

GENERAL DIMENSIONS

Model		T7.230 AC	T7.245 AC	T7.260 AC	T7.270 AC
Axles		Standard, Suspension, 4WD axles. SuperSteer			
The following dimensions are based on tractors with tyre sizes shown	Front	480/70R30			
	Rear	580/70R42			

Download full manual at youfixthis.com

ALARM(S)

Fault codes and symbols

DMD	Light	Fault code	Area of fault	Action
	-	1---	Electronic hitch control	The system fault symbols relate to an operational fault in one or more of the tractors main components, either electrical, mechanical or hydraulic. The appearance of a fault symbol may be accompanied by a four digit fault code. Consult your authorized dealer.
	-	2---	Transmission	
	-	3---	Engine	
	-	4---	Rear electronic remote control valves	
	-	45--	Front electronic remote control valves	
	-	5---	Rear PTO system	
	-	6---	Front wheel drive	
	-	7---	Rear differential lock	
	-	8---	Front PTO system	
	-	9---	Front three-point hitch	
	-	10---	Suspended front axle	
	-	12---	Electronic Park Lock	
	-	125--	Braking System	
	-	126--	ABS System	
	-	128-- 129--	Intelligent Trailer Brake Valve	With the tractor in standstill and the brake pedals latched together fully depress the brake pedals for at least 3 seconds. Release the brake pedals. If the fault is not cleared contact your authorized dealer.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SYMPTOM(S)

Engine

Problem	Possible Cause	Correction
Engine will not start or is difficult to start	Incorrect starting procedure.	Review starting procedure.
	Low or no fuel.	Check fuel level.
	Air in fuel lines.	Bleed fuel system.
	Low ambient temperature.	Use cold starting aid.
	Contaminated fuel system.	Clean and bleed fuel system.
	Clogged fuel filter(s).	Replace fuel filter element(s)
	Malfunctioning fuel pump or injectors.	See your authorised dealer.
	Malfunctioning fuel solenoid or solenoid relay.	See your authorised dealer.
	Incorrect engine oil viscosity.	Use correct viscosity oil.
	Incorrect fuel for operating temperature.	Use correct type fuel for temperature conditions.
	Slow starter speed.	See slow starter speed in Electrical.
Engine runs roughly and/ or stalls	Clogged fuel filter(s)	Replace fuel filter element(s).
	Contaminated fuel system.	Clean and bleed fuel system.
	Fuel solenoid incorrectly adjusted.	See your authorised dealer.
	Fuel cap vent blocked.	Wash cap in clean fuel oil.
Engine lacks power	Engine overloaded.	Shift to lower gear, reduce draft load or ballast carried.
	Air cleaner restricted.	Service air cleaner.
	Low engine operating temperature.	Check thermostats.
	Engine overheats.	See Engine overheats.
	Clogged fuel filter(s).	Replace fuel filter element(s).
	Incorrect fuel.	Use correct type fuel.
	Malfunctioning fuel injectors.	See your authoriszed dealer.
	Malfunctioning fuel injection pump.	See your authorized dealer.
	Leaking air intake boost pipes or exhaust manifold.	Check and rectify or see your authorized dealer.
	Turbocharger malfunctioning.	See your authorized dealer.
	Implement incorrectly adjusted.	See implement Operator's Manual.
Engine knocks	Fuel injection pump timing.	See your authorised dealer.
	Low engine oil level.	Add oil, as required.
	Low engine oil pressure.	See your authorised dealer.
	Low engine operating temperature.	Check thermostats.
	Engine overheats.	See Engine overheats.
Engine overheats.	Low engine oil level.	Add oil, as required.
	Low engine coolant level.	Fill coolant recovery tank. Check cooling system for leaks.
	Defective thermostat(s).	Check thermostat(s).
	Dirty/ blocked radiator core.	Clean.
	Excessive engine overload.	Shift to lower gear, reduce draft load or ballast carried.
	Faulty radiator pressure cap.	Replace cap.
	Cooling system blocked.	Flush cooling system.
	Loose or worn fan belt.	Check tension, adjust or replace belt if worn.
	Leaking hose or connection.	Tighten connection and/ or replace hose.
	Malfunctioning temperature gauge or sender.	See your authorised dealer.
	Malfunctioning vistronic fan.	See your authorised dealer.
Low engine operating temperature	Malfunctioning thermostat(s).	Replace thermostat(s).
	Vistronic fan locked up.	See your authorised dealer.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

HTS standard

Headland turn sequence - Quick guide

Headland Turn Sequence (HTS)

Where there is a need to repeat a sequence of actions, such as those made during a headland turn, HTS can be used to create, store and playback a programme of these actions.

The following text is provided as a quick guide to the operation of Headland Turn Sequence . A more comprehensive guide to HTS can be found beginning on page **6-14**.

NOTE: *HTS is able to record or playback sequences whether the tractor is moving or stationary, there are no tractor speed restrictions.*

Action — Recording

Control Visual

1. Depress and hold the recording switch for **1 s**. The recording symbol will flash in the HTS display.

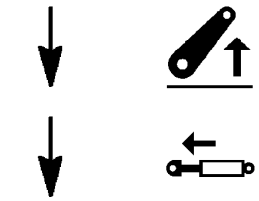


2. To start recording a sequence, momentarily depress the step switch until a 'beep' is heard, alternatively when the first vehicle function is operated, for example, a gear shift, this will also activate the recording sequence. The recording symbol will cease to flash and will remain displayed.



3. Carry out the headland manoeuvre in the normal way. As each step in the sequence is recorded, the relevant symbol will appear in the display.

   When a step is completed and a new one started, the symbol for the completed step will scroll downwards to be replaced by the new one.



4. When the HTS recordings are completed, momentarily depress the record switch to save the recorded sequences and exit HTS.



5. To record a second HTS sequence, simply select a different sequence (A or B) and repeat the previous steps.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Maintenance action	Replace	Drain fluid	Check	Cleaning	Grease	Charging	Bleed	Change fluid	Adjust	Page no.
Change the Diesel Exhaust Fluid (DEF)/AdBlue® suction filter	x									**7-50**
Change the engine air cleaner inner element	x									**7-51**
Change the air brake drier reservoir	x									**7-52**
Change the transmission oil, the rear axle oil and the hydraulic oil								x		**7-53**
Change the hydraulic suction pump oil filter	x									**7-54**
Change the 4WD differential oil								x		**7-55**
Change the engine breather filter	x									**7-56**
EVERY 2 YEARS										
Change the air conditioning receiver drier	x									**7-57**
EVERY 1500 HOURS OR EVERY 4 YEARS										
Change the poly V-belts	x									**7-58**
EVERY 2250 HOURS										
Check the engine tappet valve clearance			x							**7-60**
EVERY 3750 HOURS OR EVERY 3 YEARS										
Change the DEF/AdBlue® main filter	x									**7-61**
EVERY 3750 HOURS OR EVERY 4 YEARS										
Change the engine coolant fluid								x		**7-62**
GENERAL MAINTENANCE										
Cleaning the tractor				x						**7-66**
Fuel system water separator			x							**7-68**
Bleeding the fuel system							x			**7-68**
Hydraulic system hoses			x							**7-69**
Brake Pedal					x					**7-71**
Cab suspension, if equipped					x					**7-72**
Adjust the automatic pickup hitch					x					**7-73**
Headlight adjustment					x					**7-74**
Work light adjustment					x					**7-74**
Bulb replacement	x									**7-75**
Fuses and relays	x									**7-77**
Protecting the electronic and electrical systems during battery charging or welding							x			**7-89**
Battery removal and installation	x									**7-90**

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Width of Vehicle		
A. Width across Narrow standard fender		**2158 mm** (**85.0 in**)
A. Width across Wide fenders		**2334 mm** (**91.9 in**)
A. Width across Wide fenders plus extensions **75 mm** (**3.0 in**)		**2484 mm** (**97.8 in**)
A. Width across Wide fenders plus extensions **174 mm** (**6.9 in**)		**2682 mm** (**105.6 in**)
General Dimensions		
B. Maximum ground clearance below front axle		**613 mm** (**24 in**)
C. Front track setting NOTE: The fitting of dual wheels to the front axle is not recommended	Adjustable rims	**1560 – 2258 mm** (**61.4 – 88.9 in**)
	Fixed rim	**1840 – 1980 mm** (**72.4 – 78.0 in**)
D. Rear track setting with flange axles. NOTE: Rear track settings calculated with steel wheels.	Adjustable rims	**1528 – 2236 mm** (**60.2 – 88.0 in**)
	Fixed rim	**1840 – 1926 mm** (**72.4 – 75.8 in**)
D. With bar axle **2490 mm** (**98.0 in**)		**1870 – 2168 mm** (**73.6 – 85.4 in**)
D. With bar axle **2845 mm** (**112.0 in**)		**1870 – 2517 mm** (**73.6 – 99.1 in**)
D. With bar axle **3023 mm** (**119.0 in**)		**1870 – 2695 mm** (**73.6 – 106.1 in**)
E. Height to top of exhaust		**3164 mm** (**124.6 in**)
F. Height to top of cab		**3090 mm** (**121.7 in**)
G. Maximum overall length to the end of lower links:	with front hitch lower links in lowest position (work position)	**5516 mm** (**217 in**) – standard axle; **5564 mm** (**219 in**) – **SuperSteer™** axle;
	with front hitch lower links in uppermost position (road transport position)	**5102 mm** (**201 in**) – standard axle; **4995 mm** (**197 in**) – **SuperSteer™** axle;
	less front hitch, with front ballast carrier	**5028 mm** (**198 in**) – standard axle; **5121 mm** (**202 in**) – **SuperSteer™** axle;
	less front hitch, less front ballast carrier	**4755 mm** (**187 in**) – standard axle; **4848 mm** (**191 in**) – **SuperSteer™** axle;
H. Front hitch projection	Links horizontal (4WD only)	**756 mm** (**29.8 in**)
	Links in transport position (4WD only)	**316 mm** (**12.4 in**)
J. Wheel base		**2884 mm** (**113.5 in**) **SuperSteer™ 2977 mm** (**117.2 in**)
K. Overall length to end of lower links		**5017 mm** (**197.5 in**) **SuperSteer™ 4918 mm** (**193.6 in**)
L. Rear tail light — to end of lower links		
With narrow fender		**998 mm** (**39.3 in**)
With wide fender		**712 mm** (**28.0 in**)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

DMD	Light	Fault code	Area of fault	Action
	-	13---	Universal Control Module (UCM)	The system fault symbols relate to an operational fault in one or more of the tractors main components, either electrical, mechanical or hydraulic. The appearance of a fault symbol may be accompanied by a four digit fault code. Consult your authorized dealer.
	-	14---	Instrument cluster	
	-	15---	Steering Controller	
	-	16---	Cab auto temperature control	
	-	17---	Engine	
	-	18---	Armrest controller	
	-	19---	Selective Catalytic Reduction (SCR)	

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Problem	Possible Cause	Correction
Low engine oil pressure	Low oil level.	Add oil, as required.
	Wrong oil grade or viscosity.	Drain and refill with oil of the correct specification.
Excessive engine oil consumption.	Engine oil level too high.	Reduce oil level, as required.
	Wrong oil grade or viscosity.	Drain and refill with oil of the correct specification.
	Malfunctioning turbocharger.	See your authorised dealer.
	External oil leaks.	Repair leaks.
	Worn valve guides/ seals.	See your authorised dealer.
Excessive fuel consumption	Low engine operating temperature.	See Low engine operating temperature.
	Malfunctioning turbocharger.	See your authorised dealer.
	Engine overloaded.	Shift to lower gear, reduce draft load or ballast carried.
	Air cleaner restricted.	Service air cleaner.
	Incorrect fuel.	Use correct type fuel.
	Malfunctioning fuel injectors.	See your authorised dealer.
	Malfunctioning fuel injection pump.	See your authorised dealer.
	Leaking air intake or exhaust manifold.	Check and rectify or see your authorised dealer.
	Implement incorrectly adjusted.	See implement Operator's Manual.

Transmission

Problem	Possible Cause	Correction
Tractor does not drive in any gear	Error code will indicate source of malfunction.	Recalibrate the transmission or see your authorised dealer.
Gear shift sequence incorrect or gears missing	Error code will indicate source of malfunction.	Recalibrate the transmission or see your authorised dealer.
Jumping out of gear or holding in gear	Worn synchronisers/ couplers.	Recalibrate the transmission or see your authorised dealer.
Poor inching control when using inching pedal (clutch pedal) or jerky gear shifting	Transmission clutches require calibration.	See your authorized dealer.
High transmission operating temperature	Low oil level.	Add oil, as required.
	Incorrect oil grade/ viscosity.	Drain and refill with oil of the correct specification.
	Dirty or blocked transmission oil cooler.	Clean.
Low transmission oil pressure	Low oil level.	Add oil, as required.
	Incorrect oil grade/ viscosity.	Drain and refill with oil of the correct specification.
	Blocked transmission oil filter.	Replace filter.
Noisy transmission	Low oil level.	Add oil, as required.
	Incorrect oil grade/ viscosity.	Drain and refill with oil of the correct specification.
	Worn bearings or failed parts.	See your authorised dealer.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Recording and replaying

Headland Turn Sequence (HTS)

HTS is a system that is able to record a series of actions or 'steps' and play them back exactly as they were recorded. Each 'step' is created by operating a control which is linked to the HTS system.

When in record mode, the movement of an HTS linked control will be timed and by adding the individual steps together an HTS sequence is formed.

HTS Sequences may be replayed as a continuous operation (AUTOMATIC) or as a series of individual steps (MANUAL), each one initiated by depressing the step switch.

Up to 40 individual steps may be recorded in each sequence.

Four switches control the operation of HTS:

Auto play switch **(1)**.
To activate the automatic replay function depress this switch. Press again to deactivate auto playback.

Record switch **(2)**.
This switch is used to activate and deactivate the recording mode.

Manual playback switch **(3)**.
To activate manual replay of each HTS step, depress this switch, depress again to de-activate manual replay.

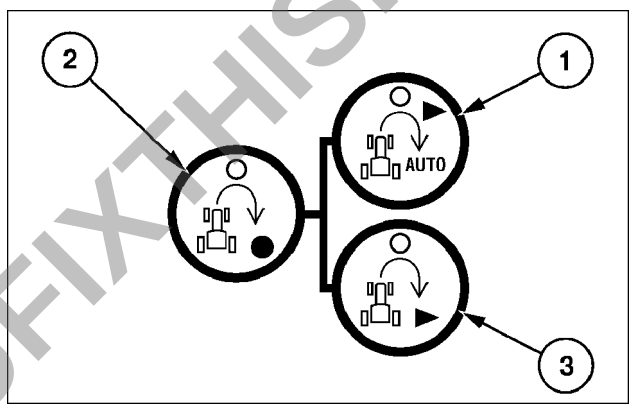
Step switch **(4)**.
The step switch is used to start or pause a programme. The step switch can also be used to insert a pause step into the sequence.

NOTE: *Each pause inserted during a recording will be recognized as a sequence step by HTS.*

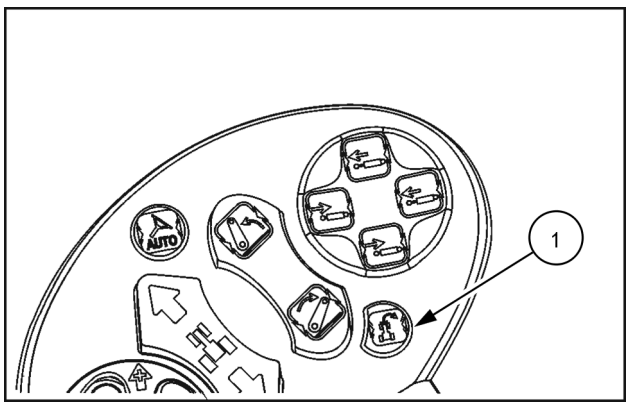
Where HTS is used to create a recording, the following actions or functions may, depending on tractor specification, be included in the sequence.

- Lock and unlock the front suspension.*
- Raise and lower the rear three point hitch.
- Raise and lower the front three point hitch.*
- Operate electronic remote valves.
- Hydraulically adjust the top link and/or right-hand lift rod.*
- Transmission operation.
- Engage and disengage the front PTO.*
- Engage and disengage the rear PTO.
- Engage the engine speed management.
- Engage the autoguidance.

*where fitted



SS10J100 1



SVIL17TR03616AA 2

PREVIEW - YOUFIXTHIS.COM

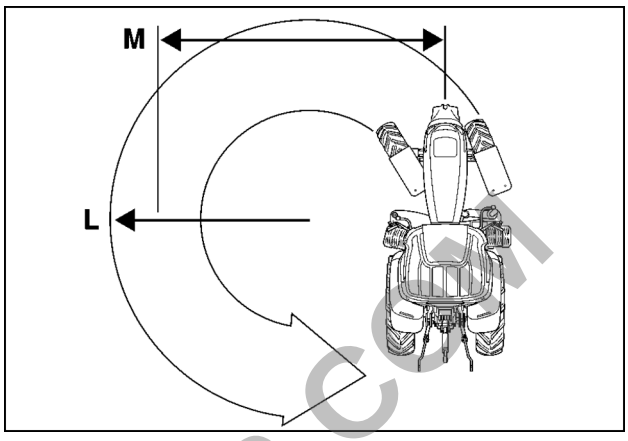
Download full manual at youfixthis.com

Minimum turn radius

Minimum turn radius

(L) SAE Turning Radius. Measured from the centre point of the circle to the centre of the tread on the outside front tyre.
(M) Turnaround Diameter. Measured from the centre point of the rear axle, in line with the drawbar.

NOTE: *All turn radius figures are measured without front fenders and steering stops adjusted to provide* ***20 mm*** *(****0.8 in****) wheel to chassis clearance on full lock with 0° front axle oscillation.*
If your tractor has tyres of a different size then the above dimensions will vary due to the difference in the rolling radius and section width of the tyres fitted.



TURN 1

Turn Radius (Minimum) Refer to following illustration	
L. Without brakes at **1550 mm** (**61.0 in**) front track setting	**6.59 m** (**21.6 ft**) SuperSteer **5.94 m** (**19.5 ft**)
L. Without brakes at **1829 mm** (**72.0 in**)front track setting	**6.1 m** (**20.0 ft**) SuperSteer **5.7 m** (**18.7 ft**)
Turn Around Diameter Refer to following illustration	
L. Without brakes at **1550 mm** (**61.0 in**) front track setting	**10.3 m** (**33.8 ft**) SuperSteer **8.7 m** (**28.5 ft**)
L. Without brakes at **1829 mm** (**72.0 in**) front track setting	**8.87 m** (**29.1 ft**) SuperSteer **7.8 m** (**25.6 ft**)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Hydraulics

Problem	Possible Cause	Correction
Hydraulic system does not operate	Error code will indicate source of malfunction.	See your authorised dealer.
	Hydraulics oil level very low.	Add oil, as required.
	Blocked hydraulic oil filter(s).	Replace oil filter(s).
Hydraulic oil overheats	Hydraulics oil level too low or too high.	Adjust oil level, as required.
	Hydraulics oil cooler blocked.	Clean.
	Blocked hydraulic oil filter(s).	Replace oil filter(s).
	Flow control incorrectly adjusted.	Allow to cool, adjust flow control before operating again.
	Hydraulic load not matched to tractor.	See your authorised dealer.
Remote control valve detent disengages prematurely	Detent release pressure set too low.	Adjust detent pressure or see your authorised dealer.
Remote equipment cylinder operates too fast or too slowly	Flow control incorrectly set.	Adjust flow control.
Remote equipment does not operate	Hoses not correctly connected.	Attach hoses correctly.
	Load exceeds system capacity.	Reduce load or use correct size cylinder (see your authorised dealer).
	Remote control valve lever movement restricted.	Adjust cables or see your authorised dealer.

Three-point hitch

Problem	Possible Cause	Correction
3- point hitch does not move when Hitch Position Control knob is moved	Error code will indicate source of malfunction.	See your authorised dealer.
	Hitch not in phase with the Position Control knob.	Put Position Control knob back in phase with lower links.
	Fast raise switch in external control position.	Put switch in correct position.
	Height limit control incorrectly positioned.	Adjust height limit control.
External power lift control does not operate	Fast raise switch not on external control position.	Centralise switch (external control position).
3- point hitch does not raise fully	Height limit control incorrectly positioned.	Adjust height limit control.
3- point hitch drops slowly	Drop rate control incorrectly positioned.	Adjust drop rate control.
3- point hitch slow to respond to draft loads	Position/ draft control incorrectly adjusted.	Adjust position/ draft control.
	Drop rate too slow.	Adjust drop rate control.
	Implement not functioning properly.	See implement operator's manual.
3- point hitch too responsive to draft loads	Position/ draft control incorrectly adjusted.	Adjust position/ draft control.
3- point hitch status light flashes continually	Position/ draft control incorrectly adjusted.	Adjust position/ draft control.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Contents

1 GENERAL INFORMATION

Metric and imperial units abbreviations 1-1
To the owner 1-3
Electro-magnetic interference (EMC) 1-5
Operator's manual storage 1-6
Product identification 1-7
Engine identification 1-8
Drive line identification 1-9
Cab identification 1-9
Product identification plate 1-10
Programming tractor functions 1-11
Before operating the tractor 1-12
International symbols 1-13
Machine stability 1-14
Selective Catalytic Reduction (SCR) system 1-18

2 SAFETY INFORMATION

Safety precautions 2-1
Safety decals 2-3
Safety rules 2-12
Burn prevention 2-19
Prevention of fire or explosions 2-20
Fire extinguisher 2-21
Protection offered by the tractor 2-22
Ecology and the environment 2-25
Hazardous substances 2-26
Emergency exit 2-27
Wheel chocks 2-28
Intended use statement 2-29
Instructor's seat 2-31

3 CONTROLS AND INSTRUMENTS

ACCESS TO OPERATOR'S PLATFORM

Introduction 3-1
Cab air filters 3-5
In cab storage (where fitted) 3-6
Cable and wiring routing 3-7
Mobile telephone usage 3-7
Implement monitor installation 3-8

OPERATOR'S SEAT

Operator's seat 3-9
Air suspension seat deluxe 3-10
Air suspension seat with passive or Dynamic Damping System (DDS) 3-15
Air suspension seat 'evolution active' 3-21

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

2 - SAFETY INFORMATION

Safety precautions

A careful operator is the best operator. Most accidents can be avoided by observing certain precautions. To help prevent accidents, read and take the following precautions before driving, operating or servicing the machine. Equipment should be operated only by those who are responsible and instructed to do so.

Personal safety



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual , you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.

Machine safety

NOTICE: *Notice indicates a situation which, if not avoided, could result in machine or property damage.*

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine or property damage. The word Notice is used to address practices not related to personal safety.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

INSTRUMENT CLUSTER
Analog Digital Instrument Cluster (ADIC) 3-70
Gauges 3-71
Indicator and warning lights 3-72
Displays 3-74
Keypad enhanced 3-77
Selecting or changing the display settings 3-79
Active and Manual Catalyst Management 3-80
Manual Catalyst Management 3-82
Ground speed calibration 3-88
Performance monitor 3-91
Armrest color display 3-96
Pop-up screens on color display 3-99
Performance monitor on color display 3-104
Programming the displays 3-109
Alarm functions 3-112
Accessing stored error codes 3-114
Selective Catalytic Reduction (SCR) exhaust treatment - Overview 3-115
Warning and advisory symbols 3-124
Warning and advisory symbols 3-138

4 OPERATING INSTRUCTIONS

COMMISSIONING THE UNIT
Refueling the tractor 4-1

STARTING THE UNIT
Starting the engine 4-3
Grid heater cold start aid (where fitted) 4-5
Fuel heater (where fitted) 4-5
Coolant immersion heater (where fitted) 4-6
Transmission oil heater (where fitted) 4-7
Boosting the battery 4-8

STOPPING THE UNIT
Stopping the engine 4-9
Automatic engine shut down with enhanced keypad (where fitted) 4-10

MOVING THE UNIT
Operating in cold temperatures 4-11
Low idle speed management 4-14
Reversible engine fan 4-15

5 TRANSPORT OPERATIONS

PREPARING FOR ROAD TRANSPORT
Carrying the tractor on a transporter 5-1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

3 - CONTROLS AND INSTRUMENTS

ACCESS TO OPERATOR'S PLATFORM

Introduction

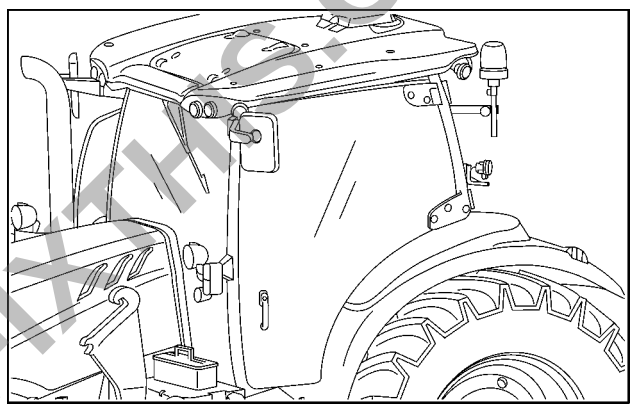
⚠ WARNING

Fall hazard!
Jumping on or off the machine could cause an injury. Always face the machine, use the handrails and steps, and get on or off slowly. Maintain a three-point contact to avoid falling: both hands on the handrails and one foot on the step, or one hand on the handrail and both feet on the steps. Failure to comply could result in death or serious injury.

W0141A

The cab has been designed for operator protection, comfort and convenience. Inside, the frame, roof, and floor are insulated to reduce noise to a minimum.

A wide opening door on the left-hand side permits entry to the cab aided by convenient grab handles and footsteps with anti-slip treads. The door and rear window are fitted with gas struts to hold them in the fully open position. Additionally, the rear window may be retained in the partially open position for increased ventilation during operation.



SVIL14TR00156AB 1

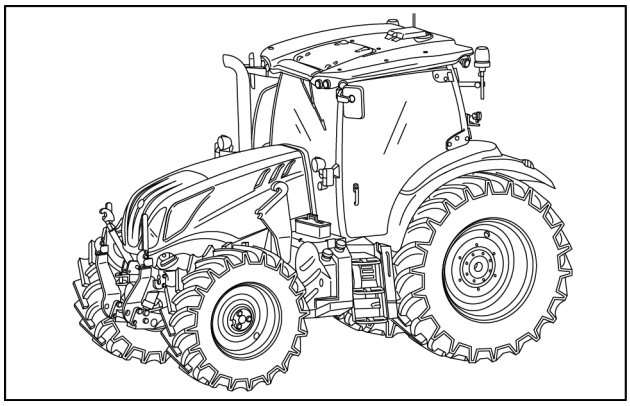
The cab features include a fresh air heater/defroster with recirculation, air conditioning, sun visor, tinted glass, interior light, auxiliary power socket, storage facilities, interior/exterior rear view mirrors and a choice of comfortable seats.

Options include automatic climate control, high visibility roof panel, radio, rear windscreen wash/wipe and electrically operated external rear view mirrors.

Entering and exiting the cab

Wherever possible, the cab should be entered from the left side. The right-hand door should only be used in emergencies to exit the cab.

To enter the cab, face the door, then open it. Place one foot on the lowest step plate and, using the grab handles on the 'A' post and inside the door, climb the steps and enter the cab.



SVIL14TR00156AA 2

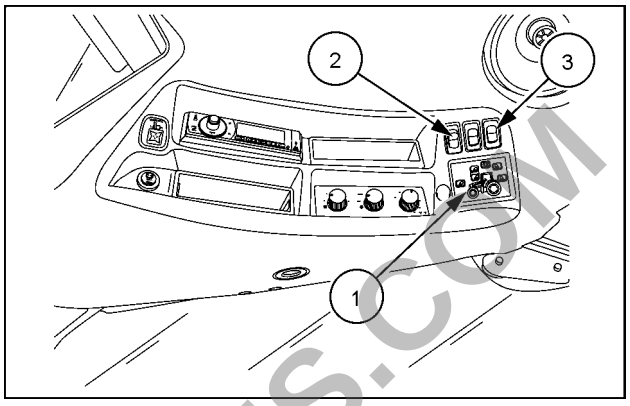
Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

OVERHEAD CONTROLS

Switch panel work lights

There are different switches located on a panel mounted in the roof console. Individual switches **(1)** control the front and rear work lights and the rotating beacon. There is also a switch for the heated mirror **(2)** (see page **10-2** and a switch for the left-hand and right-hand roof outer-most work light **(3)** (see page**3-65**).



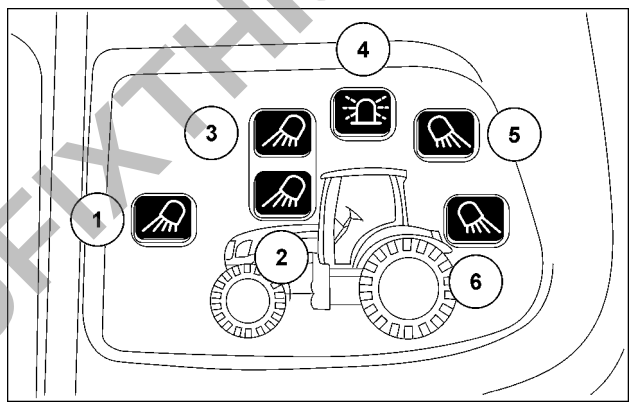
SVIL17TR00786AA 1

Switch panel work lights

⚠ WARNING

Driving hazard!
When traveling on public roads, only use the headlights and hazard warning lights. DO NOT use the work lights. An oncoming vehicle may confuse the rear work lights with the headlights.
Failure to comply could result in death or serious injury.

W0211A



SS10H006 2

NOTE: *The work lights will only operate with the tractor lights switched on.*

When the ignition key is turned on, the switches will be internally illuminated.

Depress the switches once to illuminate, depress again to turn the lights off.

- Hood mounted work lights **(1)**
- Grab rail work lights **(2)**
- Roof mounted work lights (front) **(3)**
- Rotating beacon **(4)**
- Roof mounted work lights (rear) **(5)**
- Rear pillar or fender mounted work lights **(6)**

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SYMBOL	Panel light	Warning light	Alarm	Cause	Action
	-	 flashing **4 s**/ continuous	pulsating	Lubrication pressure too low.	These symbols advises of a fault that may be critical to the operation of the machine. Stop the machine as soon as possible, investigate the cause and rectify the fault. If the fault cannot be easily rectified, consult your authorized dealer.
	-	 flashing **4 s**/ continuous	pulsating	Lubrication pressure very low.	
	-	 flashing	pulsating	Transmission oil temperature too high. (Engine Shutdown activated)	

Engine

Display	Panel light	Warning light	Alarm	Cause	Action
	-	 flashing	pulsating	Engine coolant temperature very high.	These symbols advises of a fault that may be critical to the operation of the machine. Stop the machine as soon as possible, investigate the cause and rectify the fault. If the fault cannot be easily rectified, consult your authorized dealer.
	-	 flashing	pulsating	Engine coolant temperature too high. (Engine Shutdown activated)	
	 flashing **4 s**/ continuous	 flashing	pulsating	Engine oil pressure very low.	These symbols advises of a fault that may be critical to the operation of the machine. Stop the machine as soon as possible, investigate the cause and rectify the fault. If the fault cannot be easily rectified, consult your authorized dealer.
		 flashing	pulsating	Engine oil pressure too low. (Engine Shutdown activated).	
	-	 flashing	pulsating	Engine Error Stat (Engine Shutdown activated) or Engine Hp Protection (Engine Shutdown activated).	
	-	 flashing **4 s**/ continuous	-	Engine intake air filter Blocked.	See page **7-14**.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Replaying a sequence

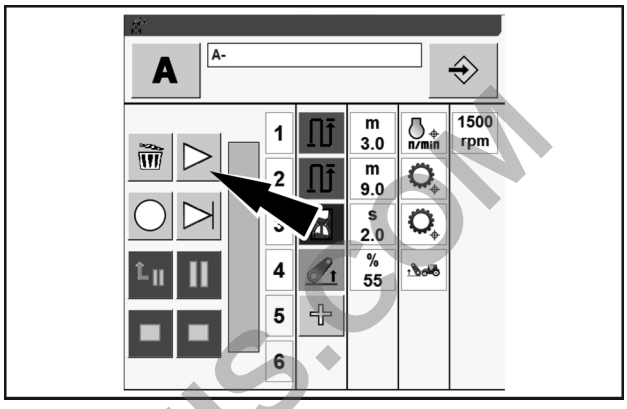
Playing a recorded Headland Turn Sequence (HTS) II

To playback a recorded sequence, touch auto or manual playback.

If auto playback is activated, each step will be replayed exactly as it was recorded.

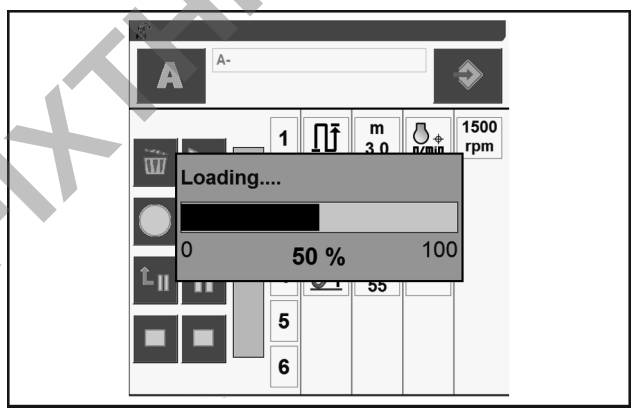
If manual playback is activated, touching the corresponding step number will only play the first step in the sequence. When the first step is completed the programme will pause until the following step number is touched.

NOTE: *A sequence can be played without saving.*

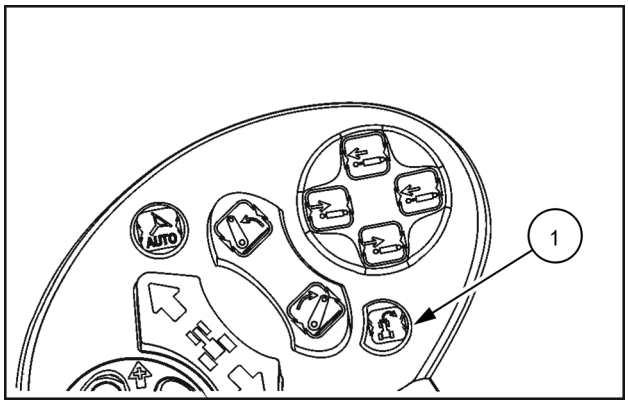


SVIL17TR03171AA 1

The sequence will be loaded. To start the sequence, press the Step switch **(1)**.

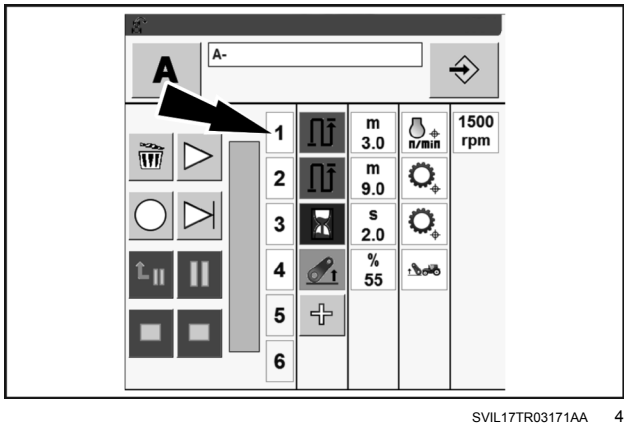


SVIL17TR03174A 2



SVIL17TR03616AA 3

As each step in the sequence is playing, the corresponding number will flash.



SVIL17TR03171AA 4

Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

Description

The rear Power Take Off on your tractor is equipped with a modulated clutch engagement system to provide smooth transfer of power when operating with heavy, high inertia, PTO- driven equipment.

Three rear PTO systems are available.

a) 1000/1000E electrical shiftable with inter-changeable output shafts and optional fender-mounted switches for stationary PTO work.

b) 540E/1000 electrical shiftable with inter-changeable output shafts and optional fender-mounted switches for stationary PTO work.

c) 540E/540/1000E/1000 electrical shiftable with inter-changeable output shafts and optional fender-mounted switches for stationary PTO work.

An automatic 'soft start' facility is provided on all models to permit easy start up of heavy, high inertio, PTO- driven equipment.

Soft start modulates PTO clutch torque over the first **5 s** of engagement to provide a slower gradual take up of the drive.

NOTE: *Soft start only operates at engine speeds of* ***1800 RPM*** *and below. Above this speed, normal PTO engagement will occur.*

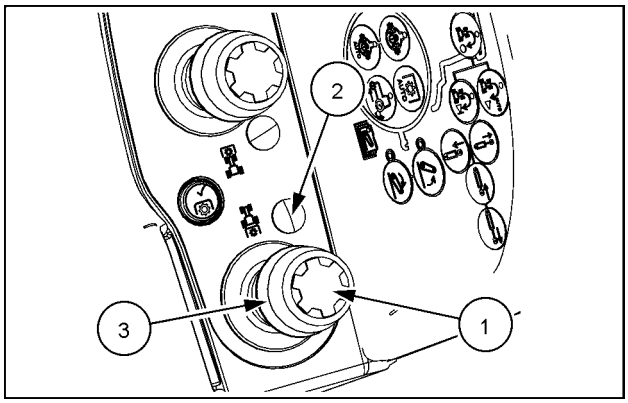
The PTO speeds and the respective engine speeds are shown on page **9-9**.

PTO SWITCH OPERATION

The PTO is engaged and disengaged by means of a switch **(1)** on the right- hand console.

Engage PTO drive

With the engine running at approximately **1000 RPM** de-press the knob **(1)**, lift collar **(3)** and then lift the switch upwards to engage the PTO. The switch will lock in the engaged position and the adjacent warning light **(2)** will illuminate.



SVIL17TR00780AA 2

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Programming a Double Acting Service

To programme the remote valves, first ensure the cylinder hydraulic hoses are properly connected to the appropriate rear remote valve. Start the tractor engine and set at the normal operating speed in which the cylinder is to be operated.

This is important as the programming of the control levers is based on a time interval corresponding to the time it takes the cylinder rod to extend and/ or retract. Any change in engine speed may have an effect on hydraulic flow and therefore the time taken for the cylinder to extend and/ or retract.

The timed period for control lever operation remains the same regardless of oil flow, therefore consistent operation in respect to engine speed and travel speed is required for the system to function correctly.

Depress the timer button **(2)** and the corresponding timer light will begin to flash. While the light is flashing move control lever **(1)** to extend the cylinder **(R)**. As the lever is operated, the light will stop flashing and will remain illuminated.

Hold the lever until the cylinder is extended to the desired position and then return the lever to the neutral position. When the lever is returned to the neutral position the timer light will start to flash again indicating the retract phase of the timed cycle can be programmed.

Operate the control lever **(1)** to retract the cylinder **(L)** the timer light **(2)** will cease to flash and remain on. Hold the lever until the cylinder has completed the retract cycle and then return it to the neutral position. After the second phase of the programme has been completed the light will remain on and the programme will be saved.

Repeat the above sequence to programme the remaining control levers if required.

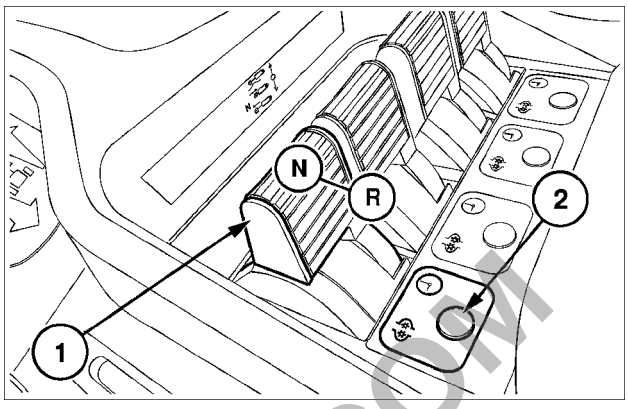
The timer programme can be made to provide varied sequences of operation i.e. extend/ retract, retract/ extend or for one movement only, extend or retract. The maximum allowable time span for any timed operation is **60 s**.

At key- off, the last timed sequence is retained in the memory and can be recalled by momentarily depressing the appropriate timer button at key- on.

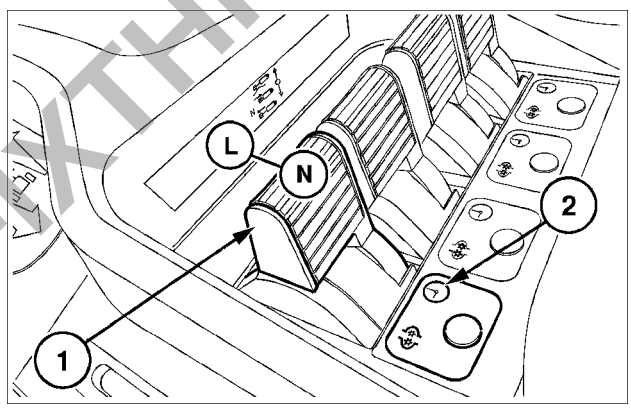
Programming Motor Mode

Motor mode is available on valves one to four inclusive and can be operated using the remote valve lever.

NOTE: *With motor mode selected, it is not possible to change between lever and joystick operation of the valve. To switch control from lever to joystick (or vice versa), cancel motor mode, change control method and re- select motor mode.*



BRL6126K 3



BRL6126F 4

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Stopping the tractor with a trailer connected

Before leaving the tractor, if the tractor is stopped with a trailer connected and the engine running, you must:

1. Shift all levers to neutral.
2. Pull the brake handle to apply the parking brake.

The trailer brakes can then be temporarily released using the corresponding trailer brake safety switch described in paragraph **6-219**.

NOTICE: *When the tractor is stationary, after applying the hand brake, wait for at least 10 seconds before switching off the engine to ensure that the trailer parking brake is engaged.*

Detaching the trailer from the tractor

For optimal safety, before detaching the trailer, the trailer's manual parking brake (if fitted) must be applied and/or the wheels must be chocked.
To detach the trailer from the tractor, reverse the connection procedure described above.

NOTE: *Always keep the dust cap in place when the trailer brake coupling is not in use. It is a legal requirement in most countries that trailer brakes may only be connected to the tractor coupling by means of a compatible female coupling.*

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

- Deterioration of some rubber sealing compounds in the fuel system.
- Biodiesel oxidation, which can lead to the formation of deposits that can harm the fuel injection system.

NOTICE: *Any problem in the engine fuel injection equipment associated with non-compliance to the following conditions for biodiesel fuel handling and maintenance will not be covered for Warranty by NEW HOLLAND.*

Purchase biodiesel fuel from a trusted supplier who understands the product and maintains acceptable fuel quality. It is highly recommended that you use biodiesel from BQ 9000 accredited suppliers to maintain the quality and consistency of the fuel. The BQ 9000 Quality Management Program is accredited by the National Biodiesel Board for producers and marketers of biodiesel fuel. See the National Biodiesel Board website at www.biodiesel.org for more information.

The use of biodiesel blends of B7 will not void the NEW HOLLAND warranty as long as the following conditions for biodiesel fuel handling and maintenance are stringently followed:

Biodiesel fuel must be pre-blended by the supplier. Mixing biodiesel fuels on-site can result in an incorrect mixture that could damage the engine and/or fuel system.

For machines using Tier 4B (final) engines with SCR aftertreatment:

1. The biodiesel blend stock must fully meet the latest fuel specification **EN 14214:2009**.
2. If the biodiesel blend stock to **DIN V 51606** is used, special precautions need to be taken to insure that it fully complies with the following special requirements:
   - Group I Metals content (Sodium + Potassium) is ≤ **5 mg/kg** per **EN14108** as specified in the biodiesel spec.
   - Group II Metals content (Calcium + Magnesium) is ≤ **5 mg/kg** per **EN14538** as specified in the biodiesel spec.
   - Phosphorus content lower than specified is a mandatory requirement. Phosphorus must not exceed **4 mg/kg** per **EN14107**.
3. The B7 blend must not exceed **1 mg/kg** for Group I Metals (Sodium + Potassium) and for Group II Metals (Calcium + Magnesium).

NOTICE: *For machines using Tier 4B (final) engines with SCR after treatment in regions where the biodiesel blend stock is supplied to the* ***DIN V 51606*** *standards, it is essential that evidence of compliance to the special limits for Group I Metals, Group II Metals and the reduced phosphorus content specified above be obtained on every delivery of fuel from the fuel supplier. Failure to comply with this requirement can result in damage to the SCR system which will not be covered under warranty.*

NOTICE: *NEW HOLLAND may void your warranty if the problem is associated with poor fuel quality due to improper blending. It is the responsibility of the fuel supplier and/or yourself to ensure the right type of fuel and blend is delivered and used.*

Maintenance intervals

For machines using the all electronic engines with a high pressure common rail fuel system, the engine oil and filter change interval is not affected when using biodiesel blends up to B7.

Check all hoses, connections and gaskets to ensure integrity and cleanliness every 3 months or 150 hours of operation, whichever comes first.

Regular oil sampling is highly recommended to monitor for oil and engine deterioration.

NOTE: *Oil sampling kits are available from your authorized NEW HOLLAND dealer.*

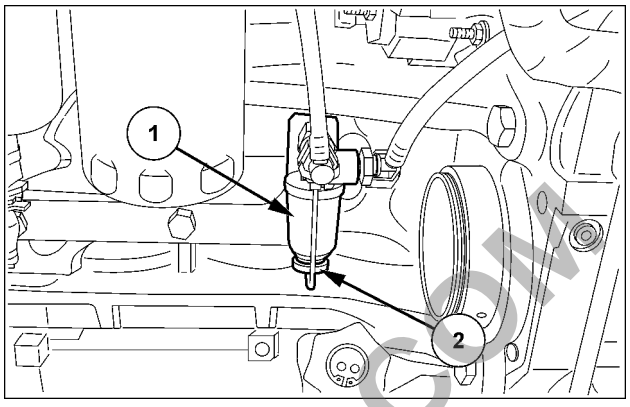
When switching back from biodiesel to regular **EN 590** diesel, all fuel filter, oil and oil filter should be changed even if this falls between routine service intervals.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Fuel system water separator

The fuel system on your tractor is protected by a prefilter and water trap. If water appears in the glass bowl of the prefilter **(1)** stop the engine and clean out the filter bowl. To remove the bowl, loosen the knurled clamp screw **(2)** and swing the retaining clip out of the way.
With the retaining clip out of the way, the glass bowl and filter can be removed by pulling downwards. Empty the contents of the bowl into a suitable container and dispose of properly.
Clean the glass bowl and wash the filter gauze in clean fuel to remove the contaminants. Check the sealing ring in the filter head for damage and replace if necessary. Refit the filter into the glass bowl and reattach the assembly to the filter head ensuring the raised boss on the filter is correctly located in the housing.
Retighten the knurled clamp screw.
The system should be bled.



SS10H009 1

Bleeding the fuel system

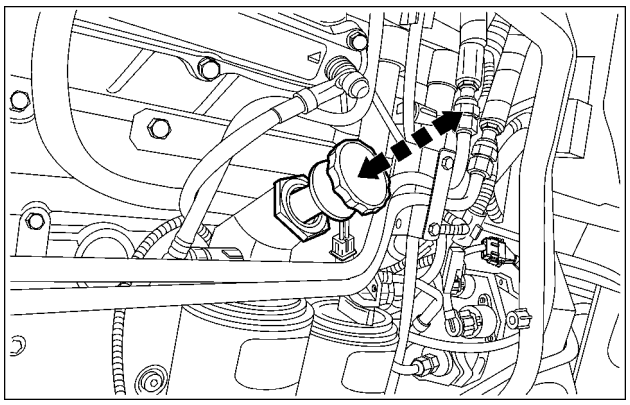
To Bleed the Fuel System

It may be necessary after carrying out maintenance work on the fuel injection system or, after running out of fuel, to purge the system of air to allow the engine to start.
If the engine fails to start after several turns, after one of the above situations has occurred, bleed the system using the following procedure:

NOTE: *If one or both of the fuel filters has been changed ensure that they have been filled with clean fuel, for further information see* ***7-41****.*

1. Ensure the tractor has adequate fuel and the battery is fully charged.
2. Loosen the low pressure pipe connection between the main filter and the fuel pump to allow trapped air to escape.
3. Unscrew the primer pump knob and proceed to pump slowly until no air bubbles appear from the open connection.
4. Tighten the low pressure pipe connection between the main filter and the fuel pump.
5. Slowly push the plunger down against the resistance until the pump knob can be screwed fully home into the filter head.

The fuel injectors and fuel injection pump are of the self bleed type and therefore any air remaining in the system will be purged as the engine is cranked to start.


SS10H007 1

Download full manual at youfixthis.com
PREVIEW - YOUFIXTHIS.COM

PREVIEW ONLY

You're viewing 25 of 650 pages

The full manual includes:

- All 650 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

New Holland T7.230, T7.245, T7.260, T7.270 Operator Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual